DETAILED ACTION

1. This is the first Office action on the merits of Application No. 10/597,534, filed on 28 July 2006. Claims 1-12 are pending.

Documents

2. The following documents have been received and filed as part of the patent application:

- Foreign Priority Documents, received on 02/28/08
- Drawings, received on 01/18/07
- Information Disclosure Statement, received on 08/17/06

EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with applicant's attorney, William W. Schwarze, on 11 September 2008.

The application has been amended as follows:

Abstract:

The abstract has been rewritten as follows:

--Elastic deformation of bridge portions in an externally toothed gear and external teeth is suppressed, and this extends the life of tooth surfaces of external teeth 19,

improves vibration characteristics, and markedly increases output torque while preventing a planetary gear device 11 from becoming large in size.--

Drawings

4. The drawings were received on 18 January 2007. These drawings are approved.

Allowable Subject Matter

5. Claims 1-12 are allowed.

6. The following is an examiner's statement of reasons for allowance:

Claim 1:

The prior art of record fails to show or render obvious an eccentric oscillating-type planetary gear device comprising an internally toothed gear, and externally toothed gear, a crank shaft, and a support body, as recited in claim 1; specifically, wherein a ratio obtained by dividing the diameter of each of the pins constituting the internal teeth by the constant pitch of the internal teeth is made smaller where the tooth tops of the external teeth are radially outside the inner periphery of the internally toothed gear.

Claim 2:

The prior art of record fails to show or render obvious an eccentric oscillating-type planetary gear device comprising an internally toothed gear, and externally toothed gear, a crank shaft, and a support body, as recited in claim 2; specifically, wherein a ratio

obtained by dividing the diameter of each of the pins constituting the internal teeth by the constant pitch of the internal teeth is made smaller where the tooth tops of the external teeth are radially outside the inner periphery of the internally toothed gear.

Claim 6:

The prior art of record fails to show or render obvious an eccentric oscillating-type planetary gear device comprising an internally toothed gear, and externally toothed gear, a crank shaft, and a support body, as recited in claim 6; specifically, wherein a meeting point where actions lines of reaction force of drive force components correspondingly given from the external teeth to the internal teeth meet is positioned between a pin circle passing the centers of all the pins constituting the internal teeth and an outer end passing circle passing radially outer ends of all the through holes.

Claim 9:

The prior art of record fails to show or render obvious an eccentric oscillating-type planetary gear device comprising an internally toothed gear, and externally toothed gear, a crank shaft, and a support body, as recited in claim 9; specifically, wherein the amount of eccentricity is in a range of 0.5 to 1.0 times the radius; and, the external teeth are cut from the tooth tops by a predetermined amount, such that interference of the external teeth and the internal teeth of the internally toothed gear is prevented.

Claim 10:

The prior art of record fails to show or render obvious an eccentric oscillating-type planetary gear device comprising an internally toothed gear, and externally toothed gear, a crank shaft, and a support body, as recited in claim 10; specifically, wherein the amount of eccentricity is in a range of 0.5 to 1.0 times the radius; and the inner periphery of the internally toothed gear between adjacent internal teeth is cut by a predetermined depth, such that interference of the external teeth and the internal teeth of the internally toothed gear is prevented.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Minegishi et al. (U. S. Patent No. 6,918,572) discloses an eccentric gear device, as shown in Fig. 3.
- Wang et al. (U. S. Patent No. 6,231,469) discloses an internally meshing planetary gear device, as shown in Figs. 1-2.

- Haga (U. S. Patent No. 5,472,384) discloses an internally meshing planetary gear structure, as shown in Figs. 1-3.
- Haga (U. S. Patent No. 5,322,485) discloses an internally meshing planetary gear structure, as shown in Figs. 1-3.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David D. Le whose telephone number is 571-272-7092. The examiner can normally be reached on Mon-Fri (0900-1730).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on 571-272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David D. Le/
Primary Examiner, Art Unit 3681
09/11/2008

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